



UNITED STATES PATENT AND TRADEMARK OFFICE

H·P
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/823,634 | 04/14/2004 | Shinya Inagaki | 826.1633D | 4656 |
| 21171 | 7590 | 07/19/2006 | EXAMINER | |
| STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005 | | | | DOAN, JENNIFER |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/823,634 | INAGAKI ET AL. | |
| | Examiner | Art Unit | |
| | Jennifer Doan | 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 May 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 92-105 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 92-105 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 April 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. 09/753,573.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 122805 & 052606.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.14, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.14, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.14. Applicant's submission filed on 05/26/06 has been entered. An action on the RCE follows.

Information Disclosure Statement

2. The prior art documents submitted by applicant in the Information Disclosure Statements filed on 12/28/05 and 05/26/06, have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

3. The drawings, filed on 4/14/04, are accepted.

Specification

4. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 92 and 96-98 are rejected under 35 U.S.C. 102(e) as being anticipated by Georges (U.S. 6,941,037).

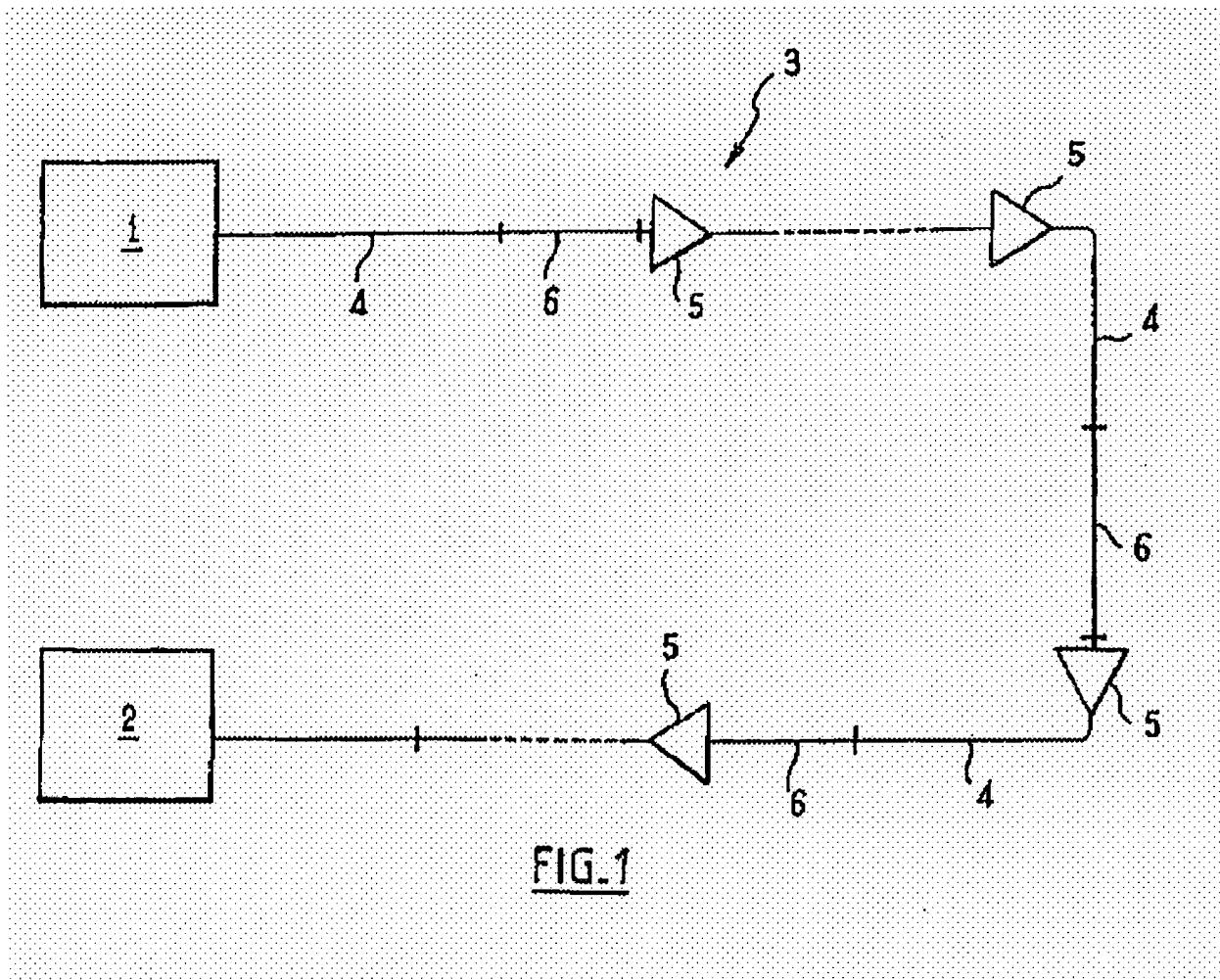
With respect to claim 92, Georges (figure 1) discloses an apparatus comprising a first compensator (6) compensating wavelength dispersion, the first compensator (6) having a constant wavelength dispersion characteristic over a plurality of wavelengths; and a second compensator (6) compensating wavelength dispersion after wavelength dispersion is compensated by the first compensator (6), wherein the first and second compensators (6) together compensate for wavelength dispersion dependent on a respective wavelength of a transmission line (3) (see column 2, lines 29-41; column 3, lines 34-41 and lines 50-55).

With respect to claim 96, Georges discloses the apparatus, wherein the respective wavelength is the wavelength of a respective signal light included in a wavelength division multiplexed (WDM) light transmitted through the transmission line

and including a plurality of signal lights at different wavelength multiplexed together (see the abstract and column 2, lines 29-48).

With respect to claim 97, Georges discloses the apparatus, wherein the first compensator is a virtually imaged phased array (VIPA) dispersion compensator (column 4, lines 13-14).

With respect to claim 98, Georges (figure 1) discloses an apparatus comprising first means (6) for compensating wavelength dispersion, the first means (6) having a constant wavelength dispersion characteristic over a plurality of wavelengths; and second means (6) for compensating wavelength dispersion after wavelength dispersion is compensated by the first means (6), wherein the first and second means together compensate for wavelength dispersion dependent on a respective wavelength of a transmission line (3) (see column 2, lines 29-41; column 3, lines 34-41 and lines 50-55).



Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 93 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Georges (as cited above) in view of Yoshimura (U.S. Patent 5,793,917).

With respect to claims 93 and 99, Georges substantially discloses all the limitations of the claimed invention except for a housing, which houses, and thereby encloses, both the first and second compensators. However, Yoshimura (figure 3) discloses a housing (1), which houses the compensators for protection. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Georges with a housing to enclose the compensating device (accordance with the teaching of Yoshimura) for the purpose of obtaining more protection for the optical device.

10. Claims 94 and 95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Georges (as cited above) in view of Bergmann et al. (U.S. Patent 6,253,005).

With respect to claims 94 and 95, Georges substantially discloses all the limitations of the claimed invention except for a substrate on which both the first and second compensators are fixed. However, Bergmann et al. (figures 6 and 7) disclose a substrate on which the compensators (36) are fixed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Georges with a substrate to fixedly hold the compensating device (accordance with the teaching of Bergmann et al.) for the purpose of obtaining more protection for the optical device.

11. Claims 100, 104 and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Georges (as cited above) in view of Taga et al. (U.S. 6,181,449).

With respect to claim 100, Georges (figure 1) explicitly discloses an apparatus comprising a first compensator (6) compensating wavelength dispersion, the first compensator (6) having a constant wavelength dispersion characteristic over a plurality of wavelengths and a second compensator (6) compensating wavelength dispersion after wavelength dispersion is compensated by the first compensator. Georges does not explicitly disclose the second compensator compensating for dispersion slope over the plurality of wavelengths.

However, Taga et al. disclose the second compensator compensating for dispersion slope over the plurality of wavelengths (see figure 1 and column 4, line 61 – column 5, line 9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Georges with the

second compensator compensating for dispersion slope over the plurality of wavelengths (accordance with the teaching of Taga et al.) for the purpose of obtaining wavelength dependency of optical amplifier gain to accumulate optical noise reduction.

With respect to claim 104, Georges discloses the apparatus, wherein the respective wavelength is the wavelength of a respective signal light included in a wavelength division multiplexed (WDM) light transmitted through the transmission line and including a plurality of signal lights at different wavelength multiplexed together (see the abstract and column 2, lines 29-48).

With respect to claim 105, Georges discloses the apparatus, wherein the first compensator is a virtually imaged phased array (VIPA) dispersion compensator (column 4, lines 13-14).

12. Claim 101 is rejected under 35 U.S.C. 103(a) as being unpatentable over Georges and Taga et al., as applied to claim 100 above, and further in view of Yoshimura (U.S. Patent 5,793,917).

With respect to claim 101, the combination of Georges and Taga et al. substantially disclose the invention as claimed. Neither Georges nor Taga et al. disclose a housing, which houses, and thereby encloses, both the first and second compensators. However, Yoshimura (figure 3) discloses a housing (1), which houses the compensators for protection. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure

of the above combination by forming the housing to enclose the compensating device (accordance with the teaching of Yoshimura) for the purpose of obtaining more protection for the optical device.

13. Claim 102 is rejected under 35 U.S.C. 103(a) as being unpatentable over Georges and Taga et al., as applied to claim 100 above, and further in view of Bergmann et al. (U.S. Patent 6,253,005).

With respect to claim 102, the combination of Georges and Taga et al. substantially disclose the invention as claimed. Neither Georges nor Taga et al. disclose a substrate on which both the first and second compensators are fixed. However, Bergmann et al. (figures 6 and 7) disclose a substrate on which the compensators (36) are fixed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure of the above combination by forming the substrate on which both the first and second compensators are fixed (accordance with the teaching of Bergmann et al.) for the purpose of obtaining more protection for the optical device.

14. Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Georges, Taga et al. and Yoshimura, as applied to claims 100 and 101 above, and further in view of Bergmann et al. (as cited above).

With respect to claim 103, the combination of Georges, Taga et al. and Yoshimura substantially disclose the invention as claimed. None of Georges, Taga et al.

and Yoshimura disclose a substrate on which both the first and second compensators are fixed. However, Bergmann et al. (figures 6 and 7) disclose a substrate on which the compensators (36) are fixed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device structure of the above combination by forming the substrate on which both the first and second compensators are fixed (accordance with the teaching of Bergmann et al.) for the purpose of obtaining more protection for the optical device.

Response to Arguments

15. Applicant's arguments with respect to claims 92-105 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JD

July 10, 2006

Jennifer Doan
JENNIFER DOAN
PRIMARY EXAMINER